

### **REMARKS**

Claims 1-18 are all the claims pending in the application. By this Amendment, Applicant editorially amends claims 1-14. The amendments to claims 1-14 were made for reasons of precision of language and consistency, and do not narrow the literal scope of the claims and thus do not implicate an estoppel in the application of the doctrine of equivalents. The amendments to claims 1-14 were not made for reasons of patentability.

In addition, Applicant adds claims 15-18 in order to provide more varied protection. Claims 15-18 are clearly supported throughout the specification, *e.g.*, pages 10-12 of the specification.

### **Preliminary Matters**

Applicant thanks the Examiner for initialing the form PTO-1449 filed with the Information Disclosure Statement on May 18, 2001. Applicant also thanks the Examiner for acknowledging the claim to foreign priority and for confirming that the certified copy of the priority document was received.

### **Summary of the Office Action**

Claims 1-3, 5, 6, and 9-14 are allegedly rejected under 35 U.S.C. § 103(a) as being unpatentable over US Patent No. 5,416,808 to Witsaman et al. (hereinafter "Witsaman") in view of US Publication No. 2001/0012791 to Miyake et al. (hereinafter "Miyake"). In addition, claim 4 is allegedly rejected under 35 U.S. C. § 103 (a) as being unpatentable over Witsaman in view of Miyake and further in view of Patent No. 6,542,754 to Sayers et al. (hereinafter "Sayers").

Finally, claims 7 and 8 are allegedly rejected under 35 U.S.C. § 103 (a) as being unpatentable over Witsaman in view of Miyake and further in view of U.S. Patent Publication No. 2002/0007453 to Nemovicher (hereinafter “Nemovicher”).

Claim Rejections under 35 U.S.C. § 103

Claims 1-3, 5, 6, and 9-14 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Witsaman in view of Miyake. Applicant respectfully traverses this rejection and respectfully requests the Examiner to reconsider this rejection in view of the comments, which follow. Of these claims, only claims 1 and 13 are independent.

Independent claim 1 recites a unique combination of features including “a receiving means for receiving information comprising a first time information having a first time data attached with a first reliability data...wherein the second reliability data indicates a reliability of the first time information included in the second time information and the second reliability data is calculated in a device transmitting the information.” The Examiner asserts that claim 1 is directed to a network system connecting plural information communicating devices for communicating information to each other through a communication network, and is obvious in view of Witsaman and Miyake.

The Examiner asserts that Witsaman’s time received from a satellite by a paging station is equivalent to the receiving information as set forth in claim 1 and that Witsaman’s time difference factor calculated in the paging station or the maintenance operation point (hereinafter “MOP”) is equivalent to the second reliability data calculated in the transmitting device, as set

forth in claim 1 (see pages 2-3 of the Office Action). The Examiner acknowledges that Witsaman does not teach or suggest transmitting first time information with a second reliability data attached. The Examiner, however, alleges that Miyake cures the deficient teachings of Witsaman, and that one of ordinary skill in the art would have been motivated to combine the two references (page 3 of the Office Action).

Applicant respectfully disagrees. Applicant has carefully studied Witsaman's discussion of a clock synchronization technique and Miyake's discussion of the base station transmitting satellite time to a number of mobile stations, which are not similar to receiving time data with a first reliability data and transmitting the time data with a second reliability data attached as set forth in claim 1.

In the conventional systems, there is a problem of the time in various devices being inconsistent. In each device of the conventional systems, a time error exists. These time errors are corrected manually or by transmitting the received satellite time by a correcting host device such as a mobile station. When the correcting host device is used, a processing load of this machine may be high as it is forced to transmit the satellite time to the other devices in the system. As a result, the transmitted time may be inaccurate because the processing time of the host machine is not taken into account. On the other hand, in the system set forth in claim 1, "the second reliability data is calculated in a device transmitting the information."

Witsaman is no different from the convention systems described above. In Witsaman, to synchronize a plurality of paging stations, a satellite time is directly transmitted to each paging station or to a maintenance operation point 58. The MOP 58 calculates and reports the

difference between the time of the paging station and the satellite clock back to the paging station (*see* Abstract). In Witsaman, just like in the conventional techniques described above, the processing time of the MOP or the processing time in the paging station is not taken into account.

In particular, Witsaman teaches a clock synchronization system 50 with a number of paging stations 24, a satellite 56 and a MOP 58 with a clock 46. Each paging station 24 has a controller 38, which is used to regulate the broadcast of pages and a clock 46 with a time counter controller 54 and a counter 52. The time counter controller 54 receives reference-time signals from the global positioning system (GPS) satellite 56. The time counter controller 54 synchronizes the counter 52 by periodically comparing the counter's local-time signal to a reference-time signal received from the satellite 56. As a result of this comparison, the time counter controller 54 resets the counter 52 so that the counter generates the correct local-time signal. The time counter controller 54 also adjusts the rate at which the clocking signal is sent to counter 52 to ensure that the counter continues to indicate an accurate local-time signal (Fig. 2; col. 5, lines 47 to 67).

In another embodiment, Witsaman teaches the MOP 58 comparing the reference time from the GPS with the time in its clock 46 and adjusts its time accordingly. The local-time signals generated by one or more of the clocks 46 located at the paging stations 24 are compared to the reference time maintained by the MOP 58. The MOP 58 then sends each time counter controller 54 a signal indicating a time difference factor between the two. The time counter controller 54 then uses the time difference factor to determine the extent to which the counter 52

initial state needs to be reset and the extent to which the clocking signal needs to be adjusted (col. 6, lines 1 to 32).

In Witsaman, however, the paging stations either receive a satellite time or the time difference calculated by the MOP. In other words, Witsaman fails to teach or suggest receiving both the time and the reliability data. The paging stations receive either the satellite time from GPS or the time difference from the MOP. Moreover, in Witsaman, the paging units do not transmit data to other paging units. MOP transmits only the time difference calculated by its controller. In other words, Witsaman clearly fails to teach or suggest attaching a second reliability data to the time information received.

In short, Witsaman is no different from the prior art discussed above. Witsaman fails to consider the processing time of the unit receiving and transmitting time information, *e.g.*, MOP. In other words, in Witsaman, the time transmitted to the paging stations, is not adjusted by the period of time it takes the MOP to calculate the time difference.

Miyake fails to cure the deficient teachings of Witsaman. Miyake is similar to the conventional techniques discussed above. Miyake teaches a base station receiving time from a GPS satellite 1 and transmitting this time to a number of mobile stations 5 (*see* Abstract and ¶¶ 7-9). Miyake clearly fails to teach or suggest a receiving means which receives time data attached with reliability data. In Miyake, the base station receives GPS satellite time and the mobile stations receive this forwarded time from the base station. Similarly, Miyake fails to teach or suggest transmitting the received time data with second reliability data attached. In

Miyake, the base station only forwards the received satellite time. In short, Miyake fails to account for the processing time of the base station.

In addition, Applicant respectfully submits that one of ordinary skill in the art would not have been motivated to combine the two references in the manner indicated by the Examiner. The Examiner alleges that one of ordinary skill in the art would have been motivated to incorporate the transmitted GPS time as taught by Miyake with Witsaman's transmitting time difference information. This time difference information is used by the paging stations to determine how off the paging terminal clock is with respect to the satellite time (see page 3 of the Office Action). In Witsaman's system, however, the point of transmitting the time difference is to synchronize the paging stations to the reference clock of MOP. Witsaman is concerned with synchronizing the paging stations to one reference clock. In other words, Witsaman teaches synchronization to a reference clock in MOP or to the GPS time.

Moreover, with the time difference transmitted by the MOP, there appears to be no point in transmitting the GPS time. If the MOP, as taught by Witsaman, is to synchronize its time to the GPS time, then ideally, the paging stations receive the value (time difference) needed to synchronize with the GPS time. In short, transmitting both the GPS time and the time difference makes little sense for at the very least it is unclear how the paging station would use the two values (the time difference received from the MOP and the GPS time).

Finally, Witsaman and Miyake cannot be combined as proposed by the Examiner. Witsaman teaches using MOP "in locations where it is too expensive or physically difficult to provide a time counter controller 54 [of the paging stations] with the GPS satellite-receiving

equipment” (col. 6, lines 8 to 13). In other words, Witsaman teaches that when the paging stations cannot receive the GPS time, transmitting time difference from the MOP. That is, Witsaman teaches the paging stations receive time from the satellite whenever possible, and when not possible only then the MOP is used. In short, Witsaman and Miyake cannot be validly combined with each other in a rejection under 35 U.S.C. § 103(a).

Therefore, “a receiving means for receiving information comprising a first time information having a first time data attached with a first reliability data...wherein the second reliability data indicates a reliability of the first time information included in the second time information and the second reliability data is calculated in a device transmitting the information,” as set forth in claim 1 is not taught or suggest by the combined teachings of Witsaman and Miyake, which lack receiving time data with reliability data and transmitting the time data with another reliability data attached. For at least these exemplary reasons, Applicant respectfully submits that independent claim 1 is patentable over the combined teachings of Witsaman and Miyake. Applicant therefore respectfully requests the Examiner to withdraw this rejection of independent claim 1. Also, Applicant respectfully submits that claims 2-3, 5, 6, and 9-12 are patentable at least by virtue of their dependency.

In addition, dependent claim 9 recites “wherein said second reliability data attached to said first time information is based on a processing time required from receiving to transmitting in the transmitting information communicating device.” The Examiner alleges that Witsaman at col. 7, lines 2 to 17 teach these features. Col. 7, lines 2 to 17 recite:

The initial synchronization and subsequent advancement of the counter 52 are controlled by the time counter controller 54. The time

counter controller 54 includes a central processing unit 64, such as a Motorola 68302 32-bit microprocessor, along with associated memory circuits, that compares the elapsed-time record of counter 52 with the reference time obtained from an external source. As a result of this comparison, the central processing unit 64 will reset the counter 52 elapsed time so that it is in synchronization with the reference time. The central processing unit 64 also controls the frequency of the output signal of a voltage-controlled oscillator (VCO) 66; this is the signal that is used to establish the clocking signal that is applied to the counter 52, emphasis added.

In other words, the above cited passage only teaches correcting the internal time based on the reference signal received, and adjusting the frequency of the internal counter based on the correction made. Clearly, the passage above fails to teach or suggest taking into account the processing time from the receiving stage to the transmitting stage, for example. Miyake fails to cure the deficient teachings of Witsaman, as explained above. For at least this additional reason, dependent claim 9 is patentable over the combined teachings of Witsaman and Miyake.

Next, Applicant respectfully traverses this rejection with respect to claim 13, which recites a unique combination of features including “a receiving means for receiving information comprising a first time information having a first time data attached with a first reliability data...wherein the second reliability data indicates a reliability of the first time information included in the second time information and the second reliability is calculated based on a device transmitting the information.” These features are similar to the features argued above with respect to claim 1, those arguments are respectfully submitted to apply with equal force here.



For at least substantially the same reasons, therefore, Applicant respectfully requests the Examiner to withdraw this rejection of the independent claim 13 and its dependent claim 14.

Next, Applicant addresses the rejection of claim 4, which is allegedly unpatentable over Witsaman and Miyake and further in view of Sayers. Applicant respectfully traverses this rejection with respect to the dependent upon claim 1, claim 4. Applicant has already demonstrated that the combined teachings of Witsaman and Miyake do not meet all the requirements of independent claim 1. Sayers is relied upon only for its teaching of a communication network being an internet. Clearly, Sayers does not compensate for the above-identified deficiencies of Witsaman and Miyake. Together, the combined teachings of these references would not have (and could not have) led the artisan of ordinary skill to have achieved the subject matter of claim 1. Since claim 4 depends upon claim 1, it may be patentable at least by virtue of its dependency.

Finally, claims 7 and 8 are rejected as being unpatentable over Witsaman and Miyake and further in view of Nemovicher. Applicant respectfully traverses this rejection with respect to the dependent upon claim 1, claims 7 and 8. Applicant has already demonstrated that the combined teachings of Witsaman and Miyake do not meet all the requirements of independent claim 1. Nemovicher is relied upon only for its teaching of transmission via email and as such clearly fails to compensate for the above-identified deficiencies of Witsaman and Miyake. Together, the combined teachings of these references would not have (and could not have) led the artisan of ordinary skill to have achieved the subject matter of claim 1. Since claims 7 and 8 dependent upon claim 1, they may be patentable at least by virtue of their dependency.

In addition, with respect to the dependent claim 7, the Examiner alleges that Nemovicher teaches information time being transmitted via E-mail as required in the dependent claim 7 (see pages 5-6 of the Office Action). Applicant respectfully disagrees. Applicant has carefully studied Nemovicher's teachings of the secure electronic mail system, which only mentions a clock approximately three times throughout the lengthy discussion, and respectfully submits that Nemovicher does not teach or suggest transmitting time information via E-mail. Nemovicher teaches placing a time stamp on an email, which is driven by an atomic clock, which receives its time from a satellite and is thus very accurate (§ 57). To be exact, § 57 recites:

Once a secure e-mail is received by secure mail server 80, the message is time and date stamped. Time and date stamping provides the message with an indication of the time and date received by secure mail server 80. Time and date functions with regard to stamping are assisted and processed by synchronization with, for example, atomic clocks providing synchronization signals through satellite communications.

In short, Nemovicher teaches time stamping each email and not transmitting second time information in an E-mail from said transmitting means, as recited in claim 7. Moreover, one of ordinary skill in the art would not have been motivated to combine the references in the manner suggested by the Examiner. One of ordinary skill in the art would never have turned to Nemovicher, which is from a different field of endeavor, e.g., see its classification, and which addresses a different problem of transferring email messages with virus checking and high level of privacy between two computers (§§ 7-8 and 18-19). Therefore, Witsaman, Miyake and Nemovicher cannot be validly combined with each other in a rejection under 35 U.S.C. § 103(a).

For at least this additional reason, dependent claim 7 is patentable over the combined teachings of Witsaman, Miyake and Nemovicher.

#### New Claims

New claims 15-16 are patentable over the prior art references cited by the Examiner at least by virtue of their dependency on claim 1. New claim 17 is patentable over the prior art references cited by the Examiner at least by virtue of its recitation that “the processing time comprises a lapsed period of time from a moment when the first communicating device received the time information to a moment when the first communicating device is ready to transmit the received time information.” Claim 18 is patentable at least by virtue of its dependency on claim 17.

#### Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly invited to contact the undersigned attorney at the telephone number listed below.

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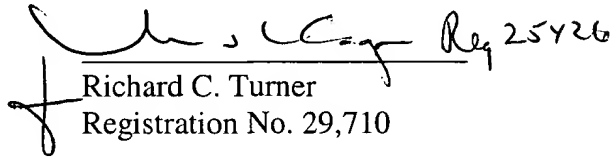
Respectfully submitted,

SUGHRUE MION, PLLC  
Telephone: (202) 293-7060  
Facsimile: (202) 293-7860

WASHINGTON OFFICE

**23373**

CUSTOMER NUMBER

 Reg 25426  
Richard C. Turner  
Registration No. 29,710

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